

REMARKS

Claims 1 through 5 and 7 through 9 have been rejected under 35 U.S.C. §103(a) as unpatentable over Adams et al (U.S. Patent No. 6,876,642) in view of Philipsson (Published U.S. Patent Application No. 2001/0007815 A1). In addition, Claim 6 has been rejected as unpatentable over the same two references, and further in view of Miyasaka et al (Published U.S. Patent Application No. 2001/0018635 A1). By the foregoing amendment, Claims 1 through 9 have been revised, and new Claims 10 through 19 have been added. For the reasons set forth hereinafter, Applicant respectfully submits that all claims of record in this application distinguish over the cited references, whether considered separately or in combination.

The present invention is directed to a method and apparatus for selectively authorizing the connection of external equipment to a databus for the exchange of data between the external equipment and units which are coupled to the databus, via a communication interface. For this purpose, an external equipment set which wishes to gain access to the databus transmits "detection information" (which includes at least an equipment identification code and a password) to an authorization system which is coupled to the databus. The detection information is communicated to the databus, and on to the authorization system, via a communication interface, which is also connected to

the databus. In addition, as recited in the claims of the present application, detection information which corresponds to the external equipment set referred to previously, is transmitted to the authorization system via a user interface, such as a keyboard.

Based on the detection information input by the user interface via the databus, and on the detection information transmitted from the external equipment set and communicated via the communication interface, the authorization system checks whether a communication is to be established between the databus and the external equipment set in question, and the result of the check is made available as authorization information. When the authorization information is positive, the authorization system permits communication to and from the external equipment set via the communication interface, being the same communication interface by which the detection information was transmitted previously. In this manner, components linked to the databus may exchange data with the external equipment set, via the databus.

According to one embodiment of the invention, as recited in Claim 1, the external equipment set comprises a mobile telephone, laptop computer, PDA or headphones which send detection information to the authorization system via the communication interface, as recited in Paragraph [0025] of the specification. In the embodiment according to new Claim 10, the authorization system stores

the authorization information, together with corresponding external equipment identification and status information for the external equipment set, in the form of a table, which is readable via the user interface, as noted in Claim 11. (See specification at paragraph [0028].) Finally, in new Claim 15, the user interface outputs optical data and inputs and outputs control information to and from a user of the databus system (specification, paragraph [0026]).

The Adams et al reference, on the other hand, discloses a wireless local area network communication system for a vehicle, in which a wireless LAN is substituted for a hardwired LAN in order to provide communication among components situated on the vehicle, as indicated in Figure 2. In particular, the system includes an embedded wireless LAN unit 150, which communicates with a mobile telephone 132 (as does a laptop computer 122), and the wireless telephone in turn communicates with a wireless wide area network⁴ via either a satellite 140 or a transmission tower 142. (See Column 2, lines 12-28; Column 3, lines 14-30.) The stated advantage of this arrangement is twofold: it is said to eliminate or reduce the amount of hard wiring necessary within the vehicle, thereby reducing costs, while at the same time allowing a greater degree of freedom of movement of electronic devices which might communicate via the wireless LAN. (See Column 3, lines 1-4.)

As can be seen from the foregoing brief description, the Adams et al patent is directed to the structure of the local communication network onboard the

vehicle, and the manner in which it interfaces with a wireless wide area network (WWAN). A comparison of Figures 1 and 2 discloses that the principal difference between the Adams et al structure and the prior art appears to be that a wireless local area network (WLAN) has been substituted for the hardwired bus 30. However, Adams et al fails to teach or suggest the limitations of the claims of the present application as described above. In particular, it does not address the manner in which a communication between, for example, the WWAN and the WLAN onboard the vehicle are established, or the manner of authentication of units which might seek to be connected to the WLAN or a hardwired bus onboard the vehicle.

In the latter regard, Applicants note that item 4 of the Office Action states that Adams et al discloses a process for selectively authorizing the connection of external equipment to a databus by an exchange of data between an equipment and the databus via a communication interface, referring in particular to Column 2, lines 13-28. However, Applicants respectfully submit that the referenced portion of the specification in Adams et al does not address the process by which communications are established, and contains no reference to a piece of external equipment (the antenna 142 or the satellite 140?) exchanging data with an authorization system in order to authenticate or validate communication between the external units and the onboard communication network. Rather, Adams et al is directed solely to the hardware structure which

permits such communication, and not the process by which communication is authorized or authenticated.

The Philipsson reference, on the other hand, is directed to a method and system for establishing a radio link between a stationary unit and a mobile communication device. In particular, the issue addressed in Philipsson is how the stationary unit is able to communicate with a single mobile communication device when a plurality of such mobile communication devices are within its communication range, and to know the identity of the mobile communication device with which it is currently communicating. In the particular example provided, the mobile communication device is an electronic "pay terminal", which is used by its owner to make payment electronically to the stationary unit, which is in the form of a "point-of-sale terminal". For this purpose, it is obviously important that the point-of-sale terminal "know" the identity of the electronic pay terminal from which it is receiving payment, so that the charge may be properly debited.

In order to satisfy this purpose, the point-of-sale terminal includes two communications devices. A first short-range radio frequency unit 20 (Figure 2) is provided for the transmission and reception of payment data, while a second communication link, for the communication of identification information is provided by a transponder 22. The range of the short-range radio frequency unit 20 is indicated by the dashed circle 13 in Figure 1A, while the range of the

transponder 22 is shown by the dashed circle 14. Since the latter is much smaller, only a single electronic pay terminal 10 (designate a in Figure 1A) can occupy the space within the communication range of the transponder, so that the point-of-sale terminal 12 can positively determine which electronic pay terminal 10 it is currently communicating with. Once that process has been completed, then the short-range radio frequency unit 20 is used for communication of transaction data via a separate communication link, whose range is indicated by the circle 13 in Figure 1A. (See paragraphs [0006], [0018] and [0019].)

Figure 1B, on the other hand, shows the situation where several point-of-sale terminals 12 are located in close proximity to each other, with a large number of electronic pay terminals 10 in the vicinity. Each of the point-of-sale terminals 12 is able to identify the electronic pay terminal 10 with which it is currently dealing (designated by the letters A, B and C), in the manner described.

An important feature of the Philipsson reference is that the structure provided therein requires two separate communication links, indicated by the circles 10 and 13, one of which has a much shorter range than the other, in order to function properly. Identification information is sent by the link with the shorter range, while transaction data is communicated by the link with the longer range. This is of course an arrangement which is quite different from either than of the present invention or the Adams et al reference. Moreover, the

use of two separate communication links is critical to the operation of Philipsson, in that the system would otherwise be unable to identify the electronic pay terminal with which it is currently communicating, when (as illustrated in Figure 1B) numerous such pay terminals are within range of the single communication link.

It is unclear how, or even whether, the structure disclosed in the Philipsson reference could be combined with Adams et al. Moreover, even if such a combination were possible, the resulting combination would not replicate the claims of the present application. In particular, each of independent Claims 1, 7, 10 and 15 recites, in various terminology, that the communication of data between the external equipment set and components attached to the databus is accomplished by the same "communication interface" as is used for the transmission of identifying detection information. Thus, for example, Claim 7 recites that, "when the authorization information is positive the authorization system permits communication to the external equipment set, by means of the communication interface, whereby components linked to the databus exchange data with the external equipment set via the databus". Claims 1, 10 and 15 are similarly limited.

In addition, neither of the Adams et al nor Philipsson references teaches or suggests a process for authorizing connection of external equipment to a databus via a communication interface. In particular, neither discloses the

transmission of detection information from an external equipment set to the authorization system via a communication interface, while corresponding detection information for the external equipment set is transmitted by the way of a user interface. Moreover, neither reference addresses the procedure whereby the authorization system checks both sets of detection information and makes the results available as “authorization information”. Finally, neither reference teaches or suggests that the authorization system stores the authorization information, together with the corresponding external equipment identification and status information for communication to a vehicle operator or “user” via the same user interface by which the detection information corresponding to the external equipment set is input to the authorization system.

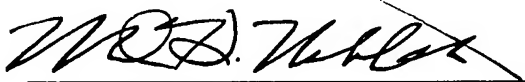
Accordingly, Applicants respectfully submit that all claims of record in this application distinguish over both Adams et al and Philipsson. The Miyasaka et al reference, on the other hand, is cited only as disclosing a system in which data transmission between external equipment and a communication interface takes place in an encrypted mode. Accordingly, Miyasaka et al neither teaches nor suggests those feature of the invention which are missing in Adams et al and Philipsson, as described above.

In light of the foregoing remarks, this application should be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general,

a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #225/50994).

Respectfully submitted,

A handwritten signature in black ink, appearing to read "G. R. Edwards", written over a horizontal line.

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